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EXAMINER

DIVECHA, KAMAL B

ART UNIT	PAPER NUMBER
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2151

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/870,302	<b>Applicant(s)</b> RACIBORSKI ET AL.	
	<b>Examiner</b> KAMAL B. DIVECHA	<b>Art Unit</b> 2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**Response to Arguments**

Claims 1-20 are pending in this application.

Applicant's arguments filed 7/27/2005 have been fully considered but they are not persuasive.

In response to applicant's argument that "a content configured to receive identifiers directly from a plurality of origin servers and an origin server database comprising a list of origin servers identified to the content tracker by the respective origin server" are not taught or suggested by Gurijala, Examiner respectfully disagrees.

Gurijala's Cache Name Server (CNS, interpreted as a content tracker) receives the identity of the Web cache server (WCS, interpreted as origin servers), the URI of the object (or other identifier) and the time at which the WCS downloaded the object (col. 6 L28-40). But before this process happens, WCS interact with CNS (directly interaction between CNS and WCS) so that the database of the CNS is updated (col. 5 L36-50). In other words, CNS (content tracker) and WCS (origin servers) interact directly with each other in order to update the database in CNS. The process of interaction involves receiving identifiers of the object and the server directly from the server. Therefore, Gurijala explicitly teaches, suggests and discloses a content tracker (CNS) configured to receive identifiers (as applicant fails to disclose the what type of identifiers are being received) directly from a plurality of origin servers (plurality of WCS).

The recited limitation of claim 1 "an origin server database comprising a list of the origin servers identified to the content tracker by the respective origin server" does not explicitly teach the number of origin servers contained in the list i.e. a list can include one origin server or a list can be empty or null with no origin servers. Based on the teaching above, Examiner strongly argues that Gurijala does teach, suggest and disclose an origin server database (col. 5 L36-50, a database) comprising a list of origin servers (a list including an identity of one origin server, col. 5 L43-50: an

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entry is created for the object in the database, the entry including the identity of object and the identity of the WCS, an origin server that stores a copy of object, i.e. a list including an identity of the WCS and object) identified to the content tracker by the respective origin server (interpreted as receiving, presented or notifying the list to the content tracker by the origin server; col. 5 L36-50 and col. 6 L22-40: WCS, an origin server notifies the CSN, a content tracker of the events so that the CNS can update its database. In notifying a CNS, CNS receives the identity of WCS, a list of origin server, from the respective origin server).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a list of web servers identified by the web servers) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that Gurijala fails to teach or suggest a content store with at least one content object which remains stored for a period of time determined by the respective origin server, Examiner disagrees (see the rejection of claim 20 below).

### **DETAILED ACTION**

#### **Claim Rejections - 35 USC § 112**

The following is a quotation of the **first paragraph of 35 U.S.C. 112**:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the

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specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claims recite the limitation “a content tracker that determines the content objects stored in the content store and configured to receive identifiers **directly** from the plurality of origin servers” and “**wherein the content exchange apparatus is configured to receive the period of time associated with at least one of the content objects in the second section from the respective origin server**”. However, the specification merely describes a content exchange apparatus for caching content objects including a content store, a content tracker, an origin server database, and a catalog of content objects. A determination is made by the content tracker as to which content objects are stored in the content store. The origin server database includes a list of origin servers associated with the content exchange (see Abstract and summary), hence the amended subject matter situations is not supported by the specification and was not described in the specification in such a way as to reasonably enable one of ordinary skilled in the art to make and use the invention.

The following is a quotation of the **second paragraph of 35 U.S.C. 112**:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 recites the limitation “the respective origin server” in the claim. There is insufficient antecedent basis for this limitation in the claim.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 5-8, and 15-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Gurijala et al. (USPN 6,601,090).
2. Regarding claim 1, Gurijala et al. (USPN 6,601,090) teaches a content exchange system for caching content objects, the content exchange apparatus comprising:
  - a. A content store comprising a plurality of content objects, each content object originating from one of a plurality of origin servers (column 4, lines 64-67).
  - b. A content tracker that determines the content objects stored in the content store and configured to receive identifiers directly from the plurality of origin servers (column 4, lines 51-53; column 5, lines 42-50).
  - c. An origin server database comprising a list of the origin servers identified to the content tracker by the respect origin server (column 5, lines 42-50; column 6, lines 36-39).
  - d. A catalog of content objects stored in the content store (column 5, lines 1-4, 45-49; column 6, lines 36-39).
3. Regarding claim 5, Gurijala et al. (USPN 6,601,090) teaches all the limitations as applied to claim 1. They further teach means wherein:

- a. The content store is divided into a first section and a second section (column 6, lines 4-15, 50-62). Note that the content store may have any number of logical separations for maintaining data.
  - b. The first section comprises a cache where less frequently requested content objects are purged in favor of more frequently requested content objects (column 6, lines 4-15, 50-62).
  - c. The second section comprises a file system where content objects remain stored in the content store for a period of time regardless of request frequency (column 6, lines 4-15, 50-62); and wherein the content exchange apparatus is configured to receive the period of time associated with at least one of the content objects in the second section from the respective origin server (col. 6 L22-62 and fig. 5).
4. Regarding claim 6, Gurijala et al. (USPN 6,601,090) teach all the limitations as applied to claim 1. They further teach a content controller, wherein the content controller finds a requested content object not presently retained in the content store (column 5, lines 25-40).
  5. Regarding claim 7, Gurijala et al. (USPN 6,601,090) teach all the limitations as applied to claim 1. They further teach a content controller, wherein the content controller finds a requested content object not presently retained in the content store on one of: another content exchange and the origin server (column 5, lines 25-40).
  6. Regarding claim 8, Gurijala et al. (USPN 6,601,090) teach all the limitations as applied to claim 1. They further teach an information repository comprising status information related to the content exchange (column 5, lines 42-50; column 6, lines 3639).
  7. Regarding claim 15, Gurijala et al. (USPN 6,601,090) teach a system for caching content objects in a content exchange with means for:

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- a. Storing content objects obtained from an origin server by the content exchange (column 4, line 67).
  - b. Receiving information about the origin server directly from the origin server (column 5, lines 45-50).
  - c. Storing the information in a database (column 6, lines 36-38).
  - d. Determining a network address for the origin server using the database (column 5, lines 45-50).
  - e. Contacting one of the origin server and another content exchange when a content object request results in a cache miss (column 5, lines 25-41).
8. Regarding claim 16, Gurijala et al. (USPN 6,601,090) teach all the limitations as applied to claim 15. They further teach means wherein the database comprises an origin server identifier and an origin server address for each associated origin server (column 5, lines 45-50; column 6, lines 36-38).
9. Regarding claim 17, Gurijala et al. (USPN 6,601,090) teach all the limitations as applied to claim 15. They further teach means wherein the storing step comprises a step of storing an origin server identifier and an origin server address for each associated origin server (column 5, lines 45-50; column 6, lines 36-38).
10. Regarding claim 18, Gurijala et al. (USPN 6,601,090) teach all the limitations as applied to claim 15. They further teach means wherein the determining step comprises a step of querying the database for an origin server address associated with a provided origin server identifier (column 5, lines 15-50).



11. Regarding claim 19, Gurijala et al. (USPN 6,601,090) teach all the limitations as applied to claim 15. They further teach means for:

- a. Determining if any other content exchange has at least a portion of the content object (column 5, lines 16-25).
- b. Requesting the portion if the portion is found on any other content exchange (column 5, lines 16-50).
- c. Requesting the portion from the origin server if the portion is not found on any other content exchange (column 5, lines 16-50).

12. Regarding claim 20, Gurijala teaches a content exchange system for caching content objects comprising: a content store comprising a plurality of content objects, each content object obtained from one of a plurality of origin servers, the content store having a first section and a second section, the first section comprising a cache where less frequently requested content are purged in favor of more frequently requested content objects, the second section comprising a file system having content objects which remain stored for a period of time regardless of request frequency (column 4, lines 64-67; column 6, lines 4-15, 50-62, Note that the sections are logically separated), at least one content object in the second section associated with a period of time determined by the respective origin server (fig. 8 and col. 6 L50-62); a content tracker that determines the content objects stored in the content store (column 4, lines 51-53; column 5, lines 42-50); an origin server database comprising a list of the origin servers (column 5, lines 42-50; column 6, lines 36-39); a catalog of content objects stored in the content store (column 5, lines 1-4, 45-49; column 6, lines 36-39),

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 2-4 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gurijala et al. (USPN 6,601,090) in view of Chase (EP 0877326A2).

14. Regarding claims 2 and 10, although the system disclosed by Gurijala et al. (USPN 6,601,090) shows substantial features of the claimed invention (as applied to claims 1 and 9, respectively), it fails to disclose means wherein the list of origin servers is modified to exclude a particular origin server when a determination is made that the particular origin server is no longer available.

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Gurijala et al. (USPN 6,601,090), as evidenced by Chase.

In an analogous art, Chase discloses a system for distributed caching, a network wherein the list of origin servers is modified to exclude a particular origin server when a determination is made that the particular origin server is no longer available (figure 4, element 400).

Given the teaching of Chase, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Gurijala et al. (USPN 6,601,090) by employing the omission of origin servers from a server list when the origin server is no longer available. This benefits the system by stopping clients from trying to access unavailable servers and wasting computing time and network bandwidth.

15. Regarding claim 3, although the system disclosed by Gurijala et al. (USPN 6,601,090) shows substantial features of the claimed invention, it fails to disclose means wherein the list of origin servers contains some origin servers that have no content objects stored in the content exchange.

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Gurijala, as evidenced by Chase.

In an analogous art, Chase discloses a system for distributed caching in a network wherein the list of origin servers contains some origin servers that have no content objects stored in the content exchange (figure 4). Note that the information sources notify the central processor when they come online regardless of their content.

Given the teaching of Chase, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Gurijala et al. (USPN 6,601,090) by employing the inclusion of servers in the origin server list even if no content data is stored from those servers. This benefits the system by allowing information on frequently used servers to be saved even if no recent downloads have resulted in content being stored.

16. Regarding claims 4 and 11, although the system disclosed by Gurijala et al. (USPN 6,601,090) shows substantial features of the claimed invention (as applied to claims I and 9, respectively), it fails to disclose means wherein content objects associated with a particular origin

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server are removed from the content store when a determination is made that the particular origin server is no longer available.

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Gurijala et al. (USPN 6,601,090), as evidenced by Chase.

In an analogous art, Chase discloses a system for distributed caching a network wherein content objects associated with a particular origin server are removed from the content store when a determination is made that the particular origin server is no longer available (figure 4, element 400). Given the teaching of Chase, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Gurijala et al. (USPN 6,601,090) by employing the removal of a content object from the content store when the origin server is unavailable. This benefits the system by ensuring that users do not access old information from a closed site that is no longer correct or available.

17. Regarding claim 9, Gurijala et al. (USPN 6,601,090) teach a content storing system for caching content objects comprising:

- a. A first content exchange (figure 1).
- b. A second content exchange (figure 1).
- c. A content bus coupled to the first and second content exchanges (figure 1) wherein:
- d. The first content exchange comprises an origin server database comprising a list of origin servers identified to the content exchange directly by the respective origin server (column 5, lines 42-50; column 6, lines 3639).

Although the system disclosed by Gurijala et al. (USPN 6,601,090) shows substantial features of the claimed invention, it fails to disclose means wherein the list of origin servers contains a plurality of origin servers that have no content objects stored in the first content exchange.

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Gurijala et al. (USPN 6,601,090), as evidenced by Chase.

In an analogous art, Chase discloses a system for distributed caching in a network wherein the list of origin servers contains a plurality of origin servers that have no content objects stored in the first content exchange (figure 4). Note that the information sources notify the central processor when they come online regardless of their content.

Given the teaching of Chase, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Gurijala et al. (USPN 6,601,090) by employing the inclusion of servers in the origin server list even if no content data is stored from those servers. This benefits the system by allowing information on frequently used servers to be saved even if no recent downloads have resulted in content being stored.

18. Regarding claim 12, Gurijala et al. (USPN 6,601,090) teaches all the limitations as applied to claim 9. They further teach means wherein:

- a. The second content exchange is divided into a first section and a second section (column 6, lines 4-15, 50-62). Note that the content store may have any number of logical separations for maintaining data.
- b. The first section comprises a cache where less frequently requested content objects are purged in favor of more frequently requested content objects (column 6, lines 4-15, 50-62).
- c. The second section comprises a file system where content objects remain stored in the content store for a period of time regardless of request frequency (column 6, lines 4-15, 50-62).

19. Regarding claim 13, Gurijala et al. (USPN 6,601,090) teach all the limitations as applied to claim 9. They further teach means wherein the content bus transports a requested object not

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presently retained in the first content exchange from the second content exchange (column 7, lines 5-17).

20. Regarding claim 14, Gurijala et al. (USPN 6,601,090) teach all the limitations as applied to claim 9. They further teach a content controller, wherein the content bus transports a requested content object not presently retained in the first content exchange from one of the second content exchange and an origin server (column 5, lines 25-40; column 7, lines 5-17).

#### **Additional References**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Zhang et al., U. S. Patent No. 6,553,409 B1.
- b. Ronstrom et al., U. S. Patent No. 6,263,402 B1.

#### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is 571-272-5863. The examiner can normally be reached on Flex schedule 8 hr days (10.00am-6.30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system,

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see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



October 7, 2005.



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SUPERVISORY PATENT EXAMINER